

REMARKS

In the Official Action the Examiner made a number of minor claims objections and claim rejections under 35 U.S.C. 112. As the Examiner will note by reference to the claim amendments made above, the Examiner will note that claims 5, 7, 9, 14 and 17-19 have been amended with an eye to addressing the various issues raised by the Examiner. It is hoped that the Examiner will agree that the claim objections and rejections under 35 U.S.C. 112 have been overcome by this response.

The Examiner rejects claims 1, 22 and 25-27 under 35 U.S.C. as being unpatentable over Colyer (U.S. Patent No. 6,023,722) in view of a paper by F. Leyman published in 1999. This grounds for rejection is respectfully traversed.

Independent claims 1, 22, 25, 26 and 27 include the features of a system or method for transmitting a message from a first client system to a second client system, the message broker comprising at least one message channel, a first channel adapter and a second channel adapter, the first channel adapter being operable to receive a message from the first client system encoded in an Internet protocol and comprising content information and destination information, read the destination information from the message and send a push request to place the message in a message channel corresponding to the destination information, the second channel adapter being operable to receive a message request from the second client system encoded in an Internet protocol and comprising source information, read the message request and identify a message channel corresponding to the source information, send a pull request to the message channel, and generate a response accordingly. As discussed in our response of 6 June 2005, the set of features is specifically intended to overcome the problem set out on page 1 of the application as filed, to help providing real-time communication between entities connected via the internet through

firewalls protecting the client systems. It is submitted that the invention as claimed is inventive over the cited prior art.

Colyer (US 6023722) discloses a messaging and queuing unit which acts as a load balancing unit. Requests from a plurality of web browsers 1A...1N which are sent via the internet to server 3B are received by a messaging and queuing unit 31 and are placed in a queue. Messages in the queue are distributed to whichever webserver 32A....32N is available. A unique correlation identifier is assigned to each request and the reply from the webserver 32A ...32N includes the correlation

identifier. The reply is placed in a reply queue in the unit 31 and then is sent back to the web browser 1A ... 1N that sends the initial request.

As correctly identified by the Examiner, Colyer does not disclose many of the features of claim 1, 22 and 25 to 27. Specifically, Colyer does not disclose:

- i) a first channel adapter operable to receive a message from the first client system,
- ii) the message comprising destination information,
- iii) at the first channel adapter being operable to read the destination information from the message and send a push request to send the message in a message channel corresponding to the destination information,
- iv) a second channel adapter, which is operable to receive a message request from the second client system comprising source information,

v) that the second channel adapter is operable to read the message request and identify a message channel corresponding to the source information, and send a pull request to the identified message channel.

Colyer does not teach any of these features as they would be irrelevant to the system which is taught in Colyer. Colyer simply describes a server which has a plurality of individual webservers 32A to 32N and a load balancing unit, the messaging and queuing unit 31, which distributes messages between the individual webservers 32A, 32N. The intention of Colyer is to provide "a high availability server capable of serving many more requests than normal availability servers" as stated in column 5, lines 18 to 20. Colyer therefore provides a single service system where messages are distributed between a plurality of webservers by being placed in a queue, from which individual webservers remove a message when each webserver is able to process a message.

In contrast, the present invention as claimed in claim 1 is for an entity, specifically a message broker, for providing one-to-one communication between two entities. The message broker requires that messages received from the first client system have a identified destination, so the message can be replaced in the correct channel. The broker also requires the messages from the second client system, i.e. the recipient system, identify the source channel which that system requires to be monitored in order that messages will be correctly transmitted. There would be no incentive for the skilled person to adapt the teaching of Colyer to provide this functionality as it is completely unnecessary in the system taught by Colyer: all requests from the client systems, the 1A ... IN, are sent to the same entity, the server 3B, and are unaware of the individual webservers 32A ... 32N. As such, there would be no need for the request to contain destination information in Colyer. Further, as the webservers simply pull messages off a common queue, there would be no motivation to add any functionality for the webservers to send a request

identifying a source.

The Examiner seems to assume that webservers 32A ... 32N each have different content. Why else is the Examiner reading into Colyer's disclosure that the request include destination information? But that ignores the fact that Colyer is for load balancing. So there is no need to "send a push request to place the message in a message channel corresponding to the destination information". Indeed, in the official action the Examiner states that "if only one queue existed in such as [sic] system then there would be no reason to expressly define message destinations". That is correct! There is no such need. Note that Colyer talks about "the queue" (column 4, line 31). Since Colyer is load balancing over multiple identical webservers, only one queue is needed, and, as the Examiner admits, there is no reason to expressly define message destinations!

Turning now to Leyman, this document teaches "data federation" using two methods. One method is message queuing as discussed in Section 2 of pages 3 to 6, whilst the other is message brokering without destination information discussed in Section 3 on pages 6 to 8.

Leyman does not teach providing a single entity to communicate messages between client systems, where the single entity has a first adapter to place messages in a message channel according to destination information, and a second adapter to receive a request from a second client system identifying the channel and performing a pull request from the identified channel in accordance with source information included in the request. In Section 2, with reference to figures 2 to 4, Leyman generally discloses message queuing systems but does not disclose a single broker facilitating communication between two entities. In figure 4, Leyman shows communication between two entities which requires two queues. Program P1 puts a message into Queue 1 referred to as the <transmission queue>. A "mover" of Message Queue Manager

MQM1 then sends the message through a "channel" to a second "mover" on Message Queue Manager 2 which places the message in a <target queue>. The program P2 retrieves the message from this target queue. Consequently, the teaching in Leyman would lead a skilled person away from providing a channel and two adapters in a single message broker entity as claimed, and teaches instead providing two client systems with means to communicate directly through a channel.

Section 3, relating to message brokering, does not appear relevant to the present claims as it is specifically stated to function by disseminating messages without the messages containing destination information specifying their targets. Rather, the message broker allows the definition of rules for routing messages based on their contents, as specified on page 6, final paragraph. Accordingly, the disclosure of Leyman in Section 3 and in particular figure 9, is not relevant to the independent claims presently on file.

The skilled person, in any case, would not be motivated to combine the teachings of Leyman or Colyer in view of the different applications of each (high availability webserver and the sharing of data which are maintained via multiple separate data stores). Even if the skilled person were to read the documents together in the absence of any motivation to do so, the skilled person would not arrive at the present invention as claimed in the independent claims.

Independent claims 1, 25, 26 and 27 are thus believed to be inventive over the citations. As claim 22 contains method steps corresponding to the features in claim 1, claim 22 is similarly believed to be allowable. All of the independent claims are believed to be allowable as dependent on allowable based claims.

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Reconsideration of this application as amended is respectfully requested.

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December 23, 2005
(Date of Deposit)

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12/23/05

(Date)

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